

# SOA RQ Methodology

A Pragmatic Approach

## Highlights

An adaptive, Web-based methodology, RQ provides an iterative SOA implementation process:

- Agreement on the 4+1 view of SOA — Business analysts, technical architects, application developers, operations staff, and executive sponsors
- Reductive analysis based on SOA characteristics
- UML-compliant SOA artifacts and templates geared towards project life cycle SOA implementations
- Includes two-day SOA JumpStart™ workshop
- Provides incremental delivery

➤ Repeatability Quality (RQ) Methodology is a prescriptive, Web-based approach for building pragmatic and flexible Service Oriented Architecture (SOA) solutions for today's IT initiatives. Expert SOA practitioners use a combination of industry-standard Unified Modeling Language (UML) and Rational Unified Process (RUP)-style, Extreme Programming (XP) techniques to guide the entire SOA life cycle implementation, with ready-to-use templates and implementation guidelines that can be readily leveraged for rapid deployment.

### RQ for SOA

For most enterprises, SOA is a paradigm shift. Due to many different interpretations and techniques, enterprises may find it challenging to adopt SOA. For this reason, it is imperative to employ the right tools, frameworks, and methodology.

Sun offers a unique methodology, RQ, to help organizations realize the value of SOA. An adaptive, role-based methodology, RQ provides an iterative and incremental approach to discover, enable, and realize SOA. It draws from more than 2000 successful implementations worldwide, and provides Unified Modeling Language (UML) compliant artifacts and templates geared towards the SOA project life cycle. RQ leverages the seventeen basic characteristics of SOA to accelerate SOA adoption.

RQ helps project teams explore and define:

- SOA vision, myths, and pitfalls
- When to use SOA appropriately
- How to identify SOA drivers and associated priorities, benefits, and challenges
- Best practices, SOA artifacts, and life cycle activities to enable project implementations

### RQ involves 4+1 view

SOA has different perspectives for business analysts, technical architects, application developers, operations staff, and the executive sponsors. These are referred to as the 4+1 view. RQ facilitates the creation of a unified

view, bringing together enterprise audiences that are interested in building SOA capabilities. If all enterprise users are not closely involved throughout the SOA implementation life cycle, delays occur and users may not feel ownership towards the final solution. Through the use of techniques such as structured workshops, RQ encourages this level of collaboration. The workshops assist both business and IT audiences to establish an understanding of various technical, quality, business, and project management activities specific to each phase of realizing SOA objectives.

To enable collaboration between various teams, RQ provides a set of artifacts that identify, define, and document SOA drivers. The easy-to-use RQ artifacts clearly illustrate the use of a top-down, business-driven approach to SOA. The RQ methodology specifies that requirements must be collected, defined, and documented with a broader perspective that is derived from various stakeholders and covers all facets of implementation life cycle challenges upfront.

### Iterative approach and incremental delivery

Typically, SOA projects involve implementing solutions in fluid environments. RQ recognizes that SOA complexities cannot be addressed using a strictly sequential process. The waterfall approach of defining the problem, then handing it over for design before building, testing, and deploying is often unsuitable. Consequently, RQ uses an iterative, incremental

“By 2007, 70 percent of SOA and Web services engagements will require a ‘cohesive, end-to-end service delivery methodology and tool set’ from an ESP for end users to maximize their investments (0.9 probability).”

#### Gartner

Michele Cantara, “Common Features of External Service Providers’ SOA Frameworks and Offerings,” September 2005



#### SOA Service Life Cycle

problem through successive refinements, and the development of an effective solution over multiple iterations. The iterations are risk-driven, with early iterations designed to address the areas of highest risks (technical and business). Each iteration delivers an executable component of the solution that can be evaluated against business requirements.

#### SOA evolution and Reductive Analysis

Defining architecture for an SOA solution is a difficult, time-consuming exercise. As there are many choices for resolving the SOA problem, RQ provides specific and detailed support using an adaptive framework that provides tools and artifacts to derive the SOA foundation.

RQ employs architecture decomposition using a business use case-driven approach to realize the services framework or SOA. Using RQ SOA reductive analysis techniques, every use case may be broken into consumer and services.

Unique in the industry, SOA Reductive Analysis conclusively helps identify, define, and design granular services from broader use cases. Once the fine-grained services have been built, they can then be assembled into coarser-grained business services.

#### Sun advantage

Sun’s pragmatic approach to SOA is driven by these principles:

- *Commitment to standards and interoperability*  
Sun’s approach is based on building interoperable and extensible solutions through the use of accepted, open industry standards.
- *Comprehensive platform and partner ecosystem*

Sun and its partners provide a wide variety of fully integrated software suites and hardware systems to develop and deploy SOAs.

- *Proven architecture, design patterns, blueprints, and recommended practices*  
Customers benefit from Sun’s expertise, techniques, and principles in the design and implementation of scalable and extensible architectures for their business systems.

#### About Sun

Sun provides a complete portfolio of affordable, interoperable, and open software systems designed to help you maximize the utilization and efficiency of your IT infrastructure. Built from the secure, highly available foundations of UNIX™ and Java™, these systems deliver implementations that are preintegrated and backward compatible. Sun’s portfolio consists of Solaris™ and Linux software for SPARC® and x86 platforms, Sun N1™ software, and the Sun Java System.